

FROM THE ARMY ACQUISITION EXECUTIVE

Objective Force Warrior

The recent attacks on our homeland and the operations that followed confirm our earlier decision to accelerate the Army's transformation to the Objective Force and provide new urgency to our work. The Army is committed to fielding the Objective Force in this decade. Army science and technology (S&T) is clearly focused on a new generation of land-combat systems, the Future Combat Systems (FCS). FCS is envisioned as a networked "system-of-systems," including manned and unmanned platforms that will be capable of conducting direct and indirect fires, air defense, reconnaissance, surveillance and target acquisition, and battle command and communications—all at operational tempos that will surpass even the war-winning capabilities in today's force.

The Army leadership recognized at the start of FCS that the Objective Force also needed a special focus on technology for the soldier who must walk the enemy's ground before any battle is finished decisively. This vision has now crystallized into an S&T program that we call the Objective Force Warrior, a new leap forward that extends the advances of the Army's current Land Warrior acquisition program for the light forces infantryman. Land Warrior will bring revolutionary information dominance, situational awareness, and weapon systems to the individual soldier. For example, every soldier will see on his display where his comrades are, will know instantly about the location of enemies, and will have a "911" capability to let people know if he is in trouble.

Still, our imaginations permit us to define even more revolutionary capabilities. Imagine, if you will, a squad of Objective Force Warriors on duty in a foreign land sometime in the period 2010-2015. They were deployed in one day, just a few hours before. They are already prepared to engage in the full spectrum of operations, from peacekeeping to high-intensity combat, because their embedded training systems and individual access to all-source worldwide intelligence allow them to start training for their missions in detail the minute they receive the deployment order in the states. On the ground, assuming their basic peacekeeping mission to separate warring local factions, they distribute miniature sensor systems to supplement national assets and unmanned air vehicle reconnaissance systems, confer with local leaders using automatic voice translation systems, and develop a thoroughly detailed knowledge of the area and its dangers.

Early in the mission, the situation gets ugly. Citizens of one side are incited to riot against the Americans, bearing pipes and pitchforks against the peacekeepers. But advanced sensors give ample warning of the unruly crowd's approach, allowing the Americans to take strong positions, increase their protective posture with automatic face shield deployment, filter system activation, and an exoskeleton force enhancement system. Issuing warnings to the crowd in the local language through their automatic translation systems, the Americans bear up for minutes with restraint under a hail of rocks, bottles, and sticks, then decide to deploy tear gas to disperse the crowd.

As the crowd runs for air, the soldiers' advanced sensors detect a new, much more dangerous threat—snipers taking aim at them from a hill several hundred yards away. Instantly, the soldiers' chameleon-like uniforms



allow them to "cloak" into near invisibility, assuming the colors and patterns of the nearby terrain. Quickly checking their rules of engagement, the soldiers direct precision, high-explosive projectiles at the snipers from their personal weapons, killing them, but not before one of the Americans is hit by a rifle bullet. His protective suit stops the bullet, reducing what would otherwise have been a killing penetration to a blunt trauma injury. Then the suit's medical status sensors and

self-medicating systems go to work, responding automatically to his wounds, reporting the impact to the chain of command, and applying pressure to affected areas.

As the squad leader checks the wounded soldier's status, the threat ratchets up yet again. Sensors detect an armor/infantry platoon-sized force approaching in battle formation. The squad deploys its organic, unmanned hovering air vehicle, takes the measure of the attack, and launches loitering attack missiles to destroy the threat, all in a matter of minutes. But one enemy vehicle survives. As the squad calls up its robotic follower missile launcher, the enemy vehicle scores a lucky hit, putting the launcher out of action. In a do-or-die play, this last vehicle is destroyed by the wounded soldier who, sustained by his protective suit, is able to fire the remaining precision-fire missile lying near him. As the day closes, the squad leader speaks to the wounded soldier's mother thousands of miles away, assuring her that he is fine and will be home soon.

Some of these scenarios were explored in an innovative video presentation created recently by the Army's Institute for Creative Technologies under the direction of Dr. A. Michael Andrews II, Deputy Assistant Secretary of the Army for Research and Technology and the Army's Chief Scientist. This whole will be much more than the sum of its parts. These technologies in turn will further enable us to implement change across our Doctrine, Training, Leader Development, Organization, Materiel and Soldiers (DTLOMS). DTLOMS will accept these new capabilities to bring another revolution in the way we fight. And not just the way Americans fight. In Afghanistan and other operations, we see the tremendous advantages of fighting as part of an international coalition. Clearly, sharing technology with our allies will enhance our overall effectiveness. Conversely, we will take special care with industrial security, anti-access systems, and other technologies to ensure that our adversaries do not gain access to this or comparable technology.

Like many products of Army S&T in the past, the technologies we've discussed will find application here at home among those who have challenging, dangerous professions including police, fire, medical responders, and emergency service workers. The sensors, protective systems, and lethal and nonlethal weapons advanced under the Objective Force Warrior Program will help firemen find children in burning homes, protect police on the streets, provide unimagined lifesaving information to paramedics responding to accident scenes, and more.

Most important, the Objective Force Warrior is not a fixed objective. Rather, it will be an evolutionary process, evolving and improving for years and decades into the future, incorporating advancements that we can't foresee even today.

That's our vision for the light forces soldier of the future—the Objective Force Warrior. I'm glad to report to you that the S&T community is organized, empowered, and motivated to take us there.

Claude M. Bolton Jr.